

*“The most common of all follies is to believe passionately in the palpably not true. It is the chief occupation of mankind.” -- H. L. Mencken*

**Last lecture for Philosophy 322 – Critical Thinking about the Paranormal  
Robert Todd Carroll**

<http://classes.skepdic.com/phil322.html>

**Why do people believe in the palpably untrue?**

More than half of all Americans believe we can heal each other by psychic or spiritual means. About one-third believe in telepathy and about one-fourth believe in clairvoyance. More than one-fourth believe that the dead can communicate with us. More than one-third believe houses can be haunted. More than 40% accept demonic possession as real. Oddly, despite the popularity of mediums claiming to get messages from the dead, only about 20% of American adults believe this is possible (Gallup survey, 2005). On the other hand, a survey done more than twenty years ago found that paranormal beliefs are not popular with the elite in the scientific community. Parapsychologists like Dean Radin and Rupert Sheldrake continue to bemoan this fact and whine about being persecuted by a scientific community that is ignorant of the great strides parapsychologists think they have made. On the other hand, if the data from this old survey is accurate, it supports Radin’s contention that most scientists, when pressed, will admit that they believe in “things that go bump in the night.” True, only about 3% of National Academy of Sciences members believe in psychic phenomena. However, 55% of our natural scientists believe ESP is either an established fact or a likely possibility. Comparable figures for other disciplines are higher: 66% of our social scientists [excluding psychologists] and 77% of our academics in the arts, humanities, and education accept ESP at least as a likely

possibility. Of the psychologists surveyed, 34% actually believe psi is an *impossibility*, while only 2% of the other respondents maintained this position. Only 34% of psychologists believe that ESP is a fact or a likely possibility (Wagner and Monnet 1979). My guess is that belief among psychologists is low because many of them understand better than other scientists how easy it is to trick the mind into believing what isn't so. On the other hand, I have no idea why so many psychologists would think psi is impossible.

The basis for these beliefs, in many of the tens of millions who hold them, is probably not much different than the basis for any set of beliefs that people hold. Most beliefs originate in interactions with others, especially with significant others such as parents. Some beliefs originate by being persuaded of them by firm believers. Many beliefs, of course, originate in direct experience. Some, like Radin (1997: ch. 2), think that most belief in the paranormal originated in direct experience. That is certainly true of members of the Parapsychological Association, where a survey found that 71% got their belief this way. However, Jim Alcock (1981) found that only about 31% of his student believers reported having had a paranormal experience. In any case, it's hard to know whether belief in the paranormal inclines one to interpret experiences as paranormal or experience leads one to believe in the paranormal (Zusne and Jones 1989: 252). Some come to their beliefs in the paranormal by what Susan Blackmore (1992) calls "illusions of connection" ("Experiences of telepathy, clairvoyance, and precognition imply a coincidence that is 'too good to be just chance'.") or "illusions of control" ("Where the coincidence is between a person's own action

and an event external to them, the same effect may be at work but the assumed cause will be personal control; or in the context of psi, it will be PK [psychokinesis].”) Very few, however, have come to their belief or have had their belief strengthened by doing or consulting scientific studies. In this course, we have focused on the scientific studies because, as the parapsychologists themselves have told us, there are many ways we can deceive ourselves in interpreting experiences and in evaluating stories told by others. Scientific studies, if done properly, can reduce the possibility that we are fooling ourselves and that we have identified the most probable cause of a phenomenon.

Collecting anecdotes about experiences that we feel we can't explain without appealing to paranormal forces is not compelling scientific evidence, even if the anecdotes number in the millions and even if the storytellers are anointed saints with Noble prizes. Such a process puts too high a premium on our ignorance and laziness. Just because we can't come up with a naturalistic explanation for an event, whether it be one we've experienced ourselves or one that someone else has claimed to have experienced, does not mean that the supernatural or paranormal explanation is the best one. If it's truth we're after, we shouldn't turn to paranormal or supernatural guesses every time we can't think of a naturalistic explanation of an event. Richard Dawkins calls this "lazy thinking." In science, it just won't do. At least, that's the theory. Scientists are supposed to test hypotheses in ways that reduce or eliminate the pitfalls of self-deception that await us when we evaluate experiences or stories without safeguards such as double-blinding and controlled conditions. As Charles Tart noted, when

confronted with an apparently paranormal experience or story, what we already believe about the paranormal will determine how we will interpret the experience. This is called *confirmation bias* and it affects almost every judgment human beings make. Tart and other scientists who believe in the paranormal or the supernatural make a strong case for studying the allegedly paranormal or supernatural under laboratory conditions. That way, said Tart, “We don’t have to hear a story told years later and hope that it was accurate. We can keep accurate records of exactly what went on at the time and know whether we have something unusual happening.”

As we noted early on in the course, anecdotes are problematic because the stories might be contaminated. Most stories get distorted in the telling and the retelling. Events get exaggerated. Time sequences get confused. Details get muddled. Memories are selective and often filled in after the fact. People sometimes misinterpret their experiences. Some people make up stories. Some stories are delusions. Sometimes improbable events are inappropriately deemed psychic. Most of us are ignorant of the many unconscious processes that guide and direct our thinking. We misinterpret common experiences as telepathic when in fact they may involve nothing more than something like *unconscious perception*, where we see or hear something unconsciously and then moments later something is brought to conscious awareness that seems uncanny. Psychologist Jim Alcock tells the story of standing in line to go into a movie theater when he wondered aloud to his wife about the whereabouts of someone they hadn’t seen in years. He wondered why he thought of this person at that

moment and then picked his very distinctive voice out in the crowd. He had heard his old friend talking but had not been paying attention to the voice, yet it was registering in his mind. Alcock also tells the story of driving “down the street with a close friend of mine that I had not seen in a while. I was about to mention the name of a fellow student, W. S. H., with whom we had both gone to school 10 years earlier, when suddenly he said ‘I wonder whatever happened to W. S. H.?’” However, rather than attribute this uncanny experience to telepathy, Alcock attributes it to “a large pendulum clock in a store window that we had passed” that had led both of them to think of W. S. H. who was known for walking around with a pendulum-style pedometer swinging from his belt (Alcock 1981: 87).

We are often ignorant of the causes of our thoughts and yet we sometimes attribute a paranormal or supernatural cause, despite that ignorance. We dream of Aunt Hildie dying and we find out later that unbeknownst to us, she had died within the past twenty-four hours. We think something paranormal has occurred. We don't believe it could be coincidence; so, we think there is a causal connection between our dream and our aunt's death. However, Christopher Scott, a British statistician, has calculated how often death dreams should come true by chance. He assumes that each person has one death dream in their lifetime and works out how often that should coincide with the death of the person dreamed about. Allowing for how many people die each night, even in a small country like England, he concluded that this startling coincidence will happen to someone once every two weeks. Now, each of these events is pure chance, but the people involved will almost certainly think it was psychic. (Think

about it: if there are 6.5 billion people on earth and just 100 things happen to each of them each day, then there will be over half a million things that happen each day whose odds are 1,000,000 to 1!) Apparently precognitive or clairvoyant dreams are impressive to those who lack understanding of The Law of Truly Large Numbers. If the odds are a million to one that any given dream is truly prophetic, then, given the number of people on earth and the average number of dreams people have during each sleep period (250 dream themes a night, according to Hines, p. 50), we should expect that every single day of our lives there will be more than 1.5 million dreams that seem clairvoyant or precognitive.

Science should provide us with ways of testing paranormal hypotheses that avoid the many pitfalls and illusions we face when interpreting experiences and stories. Yet, it turns out that spirit science, so far, has done little more than muddy the waters. More than one hundred and fifty years of scientific investigation has proved nothing of note. As Milbourne Christopher put it: "...many brilliant men have investigated the subject...and they have yet to find a single person who can, without trickery, receive even the simplest three-letter word under test conditions" (Christopher 1970: 37). The spirit scientists themselves seem as enthusiastic and as self-deceived as many of the individuals whose belief is not based on scientific investigations. Gary Schwartz, for example, would deny Christopher's assessment. Schwartz seems convinced that he has found several people who can receive many words from spirits under test conditions. As we've examined his test conditions, however, we have found that they did not eliminate many of the doubts. It appears that his belief in the afterlife

is so strong that it affects his ability to design and conduct unbiased studies. Unlike anecdotes, however, Schwartz provides us with enough details to identify with a high degree of probability that there are other explanations besides the afterlife hypothesis that explain the data better. He disagrees, of course, but it is clear that if he were a physicist or chemist and conducted his experiments in a similar manner, he would not be taken seriously. Why do spirit scientists take him seriously? They're attracted to his conclusion, which confirms their belief in spirits and the afterlife. Were he to discover, as Richard Wiseman has, no evidence for the supernatural hypothesis, they would not judge his work so favorably.

It appears that science has produced nothing but false hopes when it comes to testing things like the afterlife hypothesis. Even the best studies for ESP and psychokinesis lead to an impasse, with little more to bank one's belief on than some interesting statistics that are regarded as anomalous. The healing prayer studies seem even more likely to lead to false hope because of the seeming impossibility of controlling prayer and because of the seemingly infinite number of ways to calculate the effects of healing prayer and the seeming indifference of researchers to even bother with defining 'healing prayer' in a clear, unambiguous way. With dozens of variables to play with in just about any health study, it would be rare not to find some statistically significant correlation between prayer—or Prozac for that matter—and some health-related variable. The best that can be hoped for is some sort of seemingly anomalous statistic. The believers can always find a way to mine their data to support some sort of claim regarding the healing effects of prayer. But, in the end, we have to ask,

whether the results of these scientific studies are really any more convincing or reliable than the interpretations people give to their own experiences and to those of others? When the scientists do declare clear and precise outcomes to be measured, such as mortality or complication-free recovery from coronary artery bypass graft (CABG) surgery, the results have been uniformly negative.

Is it, then, a waste of time to do scientific studies on the paranormal? No, I think we can learn much about ourselves by such studies. We can learn how easy it is to deceive ourselves. We can learn more about how we come to beliefs in general and how our senses work to construct whatever belief system we end up with. We know there are only a few logical possibilities to explain the consciousness of paranormal and supernatural phenomena. The experiences of ghosts, spirits, out-of-body trips, miracles, and so on may be caused by things that transcend the natural, normal world. Or, they may be caused by things within the natural, normal world that we don't yet understand. Or, perhaps we just do not give alternative explanations a chance: we don't accept psychological or physical explanations that account for the phenomena, or we don't investigate the possibility of a hoax or fraud. (Remember that Dean Radin, when listing alternative explanations for apparently paranormal phenomena did not even consider the possibility of hoaxes or frauds. Yet, both of these occur quite frequently in the history of psi research and activity.) If there are forces that transcend the natural world, then we need to design, if possible, experiments that rule out naturalistic explanations. That is what Honorton [the ganzfeld experiments], Jahn [the PEAR micro-psychokinetic experiments], Elisabeth Targ



[and others doing healing prayer studies], and Gary Schwartz [the afterlife experiments] claim to have done. They have their followers, such as Dean Radin, Larry Dossey, and Charles Tart. But I find it hard to review this body of work without concluding that they exaggerate the significance of what's been done scientifically and that they are driven more by their beliefs than the data, despite Dean Radin's and Gary Schwartz's loud voices to the contrary.

Non-believers who study paranormal phenomena are headed in a different direction than the believers. Neuroscientists, such as Peter Brugger, are trying to find physiological bases for alleged paranormal experiences. For example, he and his associates have published reports on studies that examine a physical basis for such experiences as hauntings, the out-of-body experience, the feeling of a presence, the doppelganger (ghostly counterpart or double) experience, and phantom limb sensations. There is hope that neuroscience may help us truly understand many aspects of paranormal and occult experiences. Such work seems more likely to produce useful knowledge than the work of people like Radin, Schwartz, and the prayer doctors.

I think there is much to hope for from those psychologists—such as Richard Wiseman, Zusne & Jones, Andrew Neher, Graham Reed, and Chris French—who have studied parapsychology with an eye toward understanding what physical or psychological events might be occurring that give rise to paranormal experiences. Explanations of weird experiences in terms of unconscious experience; selective memory; affective, cognitive, or perceptual illusions; brain aberrations; or other naturalistic processes can be very fruitful in

building up a body of knowledge about paranormal beliefs that provide us with a better understanding of ourselves and how we experience the world. Even knowledge of hoaxers, deceivers, and so-called con artists can help us understand not only how we come to believe in the paranormal, but also how we might avoid being duped in the future.

One advantage the skeptics have over the believers is that there is no theory from which parapsychologists are working. Without a theoretical backdrop against which to design experiments and test hypotheses, they seem to be as much in the dark in the laboratory as they were in the séance room. With theoretical underpinnings from the psychology and physiology of perception and memory, the neurosciences, physics, and so on, the skeptics are able to design and test hypotheses that lead to unambiguous results. Until the spirit scientists come up with an acceptable theory as to how psi works, their discipline is unlikely to find acceptance among the rest of the scientific community.

What seems to drive many of the spirit scientists is the desire to prove scientifically the folk belief in spirits—non-physical, conscious perceivers with intentions and immortal existence. This has been a motivation since the middle of the 19<sup>th</sup> century and it still drives researchers like Schwartz, Tart, and the healing prayer scientists. Science, on the other hand, has resisted non-material, non-mechanistic forces, and has been moving away from dualistic and supernatural explanations of events in the world we experience. Most scientists don't deny the existence of the spiritual, but they consider it off limits to science. Some scientists, like evolutionary biologist Richard Dawkins and physicist Victor

Stenger, however, think that issues like God's existence can be studied scientifically. In their view, the scientific evidence is compelling that the God worshipped by Jews and Christians most probably does not exist.

The whole enterprise of doing controlled studies is brought into question by those who wish to extend science beyond the realm of the natural. Schwartz and those doing healing prayer studies don't seem to realize that if spirits or other transnatural forces are causal agents of things in the natural world, then a) all controlled studies would be affected (any study, anywhere, at any time could be affected by spirits); b) the possibility of doing controlled studies is called into question when the alleged causes are, by definition, beyond our control; and c) the age-old metaphysical problem of how two distinct kinds of reality interact causally is brought back to the fore.

Nevertheless, even if the skeptics are correct in their naturalistic, non-paranormal explanations of occult experiences, that does not diminish the powerful subjective effect of such experiences. The spirit scientists, however, seem to debase occult experiences by reducing them to statistical probabilities over groups rather than unique and potentially life-transforming experiences of individuals.

The work of the spirit scientists should remind us that we need to be skeptical of science. Just because a scientist does a randomized, double-blind, controlled study that results in a statistic not likely due to chance at the 95% confidence interval does not mean the results are meaningful or even warranted.

Not only is it not necessarily the case that the statistically significant is meaningful, but there are many ways data can be manipulated to yield statistical significance. With meta-studies, for example, there is the problem of the file-drawer effect (not counting studies with negative results) and there is the problem of including poorly done studies with positive results. Something is wrong when two scientists evaluate the same set of studies and one concludes the data show nothing significant and the other finds results that defy chance. The skeptic refuses to include poorly designed or questionable studies, while the believer denies that they should be excluded. At the very least we should remember not to put too much faith in single studies. We should also remember that replication of a faulty experiment will give us a false sense of confirmation. We should not be too impressed when a scientist does several studies with mixed results, lumps them together for a meta-analysis, and then, as if by magic, pulls out of the hat a statistic that he finds astounding.

In the beginning, spirit scientists intended to prove to the skeptics beyond any reasonable doubt that spirit phenomena were real. Almost immediately they discovered it was easy to be deceived and that they couldn't succeed in this task until they designed tests that eliminated all trickery, fraud, sensory leakage, and the like. One reason we are no closer today than we were 150 years ago to proof of spiritual phenomena is that the task has proved impossible. Some researchers, like Schwartz, are still being deceived and working with poorly designed experiments. Some, like E. Targ, are still resorting to deception to arrive at positive results. Some, like Radin, have found meta-analysis to be the

philosopher's stone of parapsychology. It is true that some experiments in parapsychology seem to have been done properly, but the only unambiguous results of such studies are some anomalous statistics that might indicate something paranormal. That's not quite the result hoped for in 1882 by the Cambridge philosopher Henry Sidgwick, one of the founders of the Society for Psychical Research, who wrote that the goal of the society was to

drive the objector into the position of being forced either to admit the phenomena as inexplicable, at least by him, or to accuse the investigators either of lying or cheating or of a blindness or forgetfulness incompatible with any intellectual condition except absolute idiocy.

Sidgwick's goal, we now know, is unattainable. We have a much better understanding of the biological mechanisms that drive beliefs and we now understand that beliefs, especially important beliefs, come in sets rather than isolated units. We know that beliefs are often not determined by evidence for or against them, but by their cash-value. Do they help us survive, physically or psychologically? Do they comfort us? Do they fit with other beliefs we have? A person's belief in immortality, for example, is not likely to hinge on the result of any experiment Gary Schwartz or anyone else does. Belief in ESP or PK is unlikely to be swayed in most people one way or the other by the results of any number of experiments cited by Dean Radin. Finally, few believers in supernatural or paranormal beings or powers are likely to be persuaded away from those beliefs by the best arguments skeptics can come up with. There are some, however, who have chosen to follow the data and the arguments wherever

they may lead. Because of the difficulty in recognizing when we are deceiving ourselves, however, we may never know whether our own beliefs are the most consistent with the data and the arguments or whether, for reasons we can't yet decipher, we are fooling ourselves and are unable to see that we believe what we do because to believe otherwise would be too painful for us at the present time. Even scientists can't be sure that they are not devising experiments primarily to reinforce what they already believe, rather than to objectively study phenomena with a willingness to let the chips fall where they may. Those of us who are critical of some of those experiments, while supportive of others, can't be sure that we aren't deceiving ourselves into thinking we are being fair and objective in our criticisms. We, too, may be driven by the desire to support our preconceived notions rather than a desire to find the truth, whatever it might be.

If there is any hope for finding the truth in parapsychology, it is that there are cooperative ventures like that between parapsychologist Marilyn Schlitz and skeptic Richard Wiseman, and that between Peter Brugger and John Palmer. Working together, believers and disbelievers can counteract each other's biases in setting up, running, and evaluating the results of parapsychological experiments. It's a hope that I admit may not be any more realistic than Sidgwick's. Most of us may be doomed to die with our biases on. For the few who aren't, though, we sail on, full steam ahead, trying our best to be fair but never really knowing for sure whether we're sailing on the *Santa Maria* or the *Titanic*.

**May 15, 2007**

## Sources

Alcock, James E. (1981). *Parapsychology: Science or Magic? – A Psychological Perspective*. Pergamon.

Blackmore, Sue. (1992). "Psychic Experiences: Psychic Illusions." Published in, in *Skeptical Inquirer* 16 367-376. <http://www.susanblackmore.co.uk/Articles/si92.html>

Carroll, Robert T. (2003). *The Skeptic's Dictionary - A Collection of Strange Beliefs, Amusing Deceptions, and Dangerous Delusions*. Wiley.

Dawkins, Richard. (2006). *The God Delusion*. Houghton Mifflin.

Gallup survey (2005). <http://home.sandiego.edu/~baber/logic/gallup.html>

Hines, Terence. (1990). *Pseudoscience and the Paranormal* (Buffalo, NY: Prometheus Books.

Neher, Andrew. (1980). *The Psychology of Transcendence*. Prentice-Hall.

Radin, Dean. (1997). *The Conscious Universe: The Scientific Truth of Psychic Phenomena*. HarperEdge.

Reed, Graham. (1988). *The Psychology of Anomalous Experience: A Cognitive Approach*. Prometheus Books.

Schwartz, Gary E. with William L. Simon. (2002). *The Afterlife Experiments: Breakthrough Scientific Evidence of Life After Death*. Atria Books.

Stenger, Victor. (2007). *God: The Failed Hypothesis - How Science Shows That God Does Not Exist*. Prometheus.

Wagner, M. W. & Monnet, M. "Attitudes Of College Professors Toward Extra-Sensory Perception," *Zetetic Scholar*, 5, 7 – 16, 1979.

Zusne, Leonard and Warren H. Jones. (1989). *Anomalistic Psychology: A Study of Magical Thinking*. 2nd ed. Lawrence Erlbaum Associates.